

CLAIMS

1. A three-dimensional image-capturing device, comprising:

first and second image sensors;

first and second optical systems;

a texture image capturing processor that captures a still image of a subject by said first image sensor through said first optical system;

a three-dimensional measuring processor that measures distance information about said subject for each pixel of said second image sensor through said second optical system; and

a parallax compensation processor that compensates for parallax between said first optical system and said second optical system by said distance information.

2. A device according to claim 1, which comprises a three-dimensional coordinate data generating processor that generates three-dimensional coordinate-data by calculating three-dimensional coordinates for each point on said subject corresponding to said each pixel of said second image sensor from said distance information, and said parallax is compensated for by utilizing said three-dimensional coordinate data.

3. A device according to claim 2, wherein said parallax

compensation processor calculates said three-dimensional coordinates in a second coordinate system, and then transfers said three-dimensional coordinates to a first coordinate system for which the origin is set at the focal point of said first optical system.

4. A device according to claim 3, wherein the origin of said second coordinate system is set at the focal point of said second optical system.

5. A device according to claim 3, wherein said parallax compensation processor further processes a projection of each point on said subject corresponding to said each pixel of said second image sensor onto the imaging surface of said first image sensor, so that a correspondence between pixels of said first image sensor and said second image sensor is obtained.

6. A device according to claim 5, wherein said projection is based on three-dimensional coordinates of said each point on said subject, which are represented in said first coordinate system.

7. A device according to claim 1, wherein said parallax compensation processor compensates for said parallax by means of projecting each point on said subject corresponding to said each pixel of said second image sensor onto the imaging surface of said first image sensor, so that a correspondence between the pixels of said first image sensor and second image sensor is obtained.